



CRYSTAL OSCILLATOR (SPXO)

OUTPUT : LV-PECL

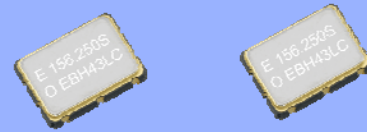
LOW PHASE JITTER

SG7050EBN

- Low phase jitter : 65fs typ. *2
- Frequency range : 100 MHz to 175 MHz
- Supply voltage : 2.5V Typ. / 3.3 V Typ.
- Function : Output Enable (OE)
- External dimensions : 7.0 × 5.0 × 1.5 mm
- Output : LV-PECL



Product Number (Please contact us)
SG7050EBN: X1G004511xxxx00



Actual size



Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Output frequency range	f _o	100.000 MHz to 175.000 MHz	Please contact us about available frequencies.
Supply voltage	V _{cc}	C: 3.3 V ± 0.165 V D: 2.5 V ± 0.125 V	
Storage temperature	T _{stg}	-55 °C to +125 °C	Store as bare product after packing
Operating temperature	T _{use}	G: -40 °C to +85 °C	
Frequency tolerance *1	f _{tol}	J: ±50 × 10 ⁻⁶ Max.	
Current consumption	I _{cc}	75 mA Max. 55mA Max.	OE=V _{cc} , L _{ECL} =50Ω
Disable current	I _{dis}	15µA Max.	OE=GND
Output load condition	L _{ECL}	50Ω	Terminated to V _{cc} -2.0V
Output voltage	V _{OH}	V _{cc} -1.025 V Min.	DC characteristics
	V _{OL}	V _{cc} -1.62 V Max.	
Symmetry	SYM	45 % to 55 %	at outputs crossing point
Rise/Fall times	T _r /T _f	0.4 ns Max. 0.5 ns Max.	at 20 % to 80 % output swing
Input voltage	V _{IH}	70% V _{cc} Min.	OE terminal
	V _{IL}	30% V _{cc} Max.	
Oscillation start up time	t _{str}	3 ms Max.	Time at minimum supply voltage to be 0 s

*1 Includes initial tolerance, temperature change, V_{cc} change and 10years aging

*2 Output frequency is 156.25MHz (at V_{cc}=3.3V±0.165V)

Phase Jitter

Phase Jitter [fs] (Offset Frequency 12k to 20MHz)	Output frequency	100 MHz	125 MHz	156.25 MHz	175 MHz	Supply voltage
	Typ.	125	95	85	82	
Max.	165	160	125	125	V _{cc} =3.3V±0.165V	
Typ.	110	80	65	65		
Max.	140	120	100	100		

Product Name SG7050 E BN 156.250000MHz C J G A

(Standard form)

① ② ③ ④⑤⑥⑦

①Model ②Output (E: LV-PECL) ③Frequency ④Supply voltage ⑤Frequency tolerance

⑥Operating temperature ⑦Internal identification code ("A" is default)

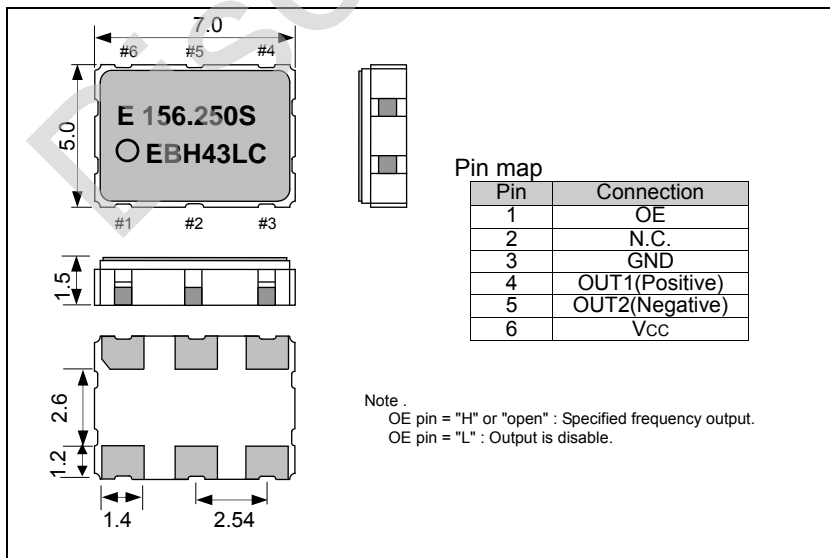
④Supply voltage	
C	3.3 V Typ.
D	2.5 V Typ.

⑤Frequency tolerance	
J	±50 × 10 ⁻⁶

⑥Operating temperature	
G	-40 to +85°C

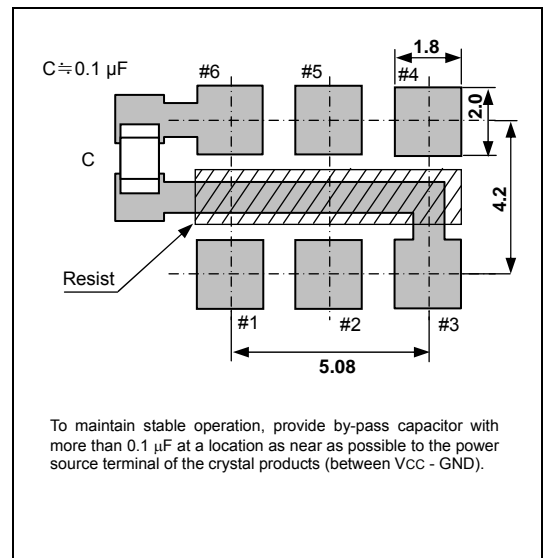
External dimensions

(Unit :mm)



Footprint (Recommended)

(Unit :mm)



► Explanation of the mark that are using it for the catalog

	<p>► Pb free.</p>
	<p>► Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)</p>
	<p>► Designed for automotive general equipment.</p>
	<p>► Designed for automotive applications related to driving and safety.</p>

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